

## DYNAMIC NPR BOOST

### ABSTRACT OF THE DISCLOSURE

5 A method and apparatus for enhancing the effective dynamic range of an RF-to-optical-to-RF link. The transmission through an optical link of RF digital signals having magnitudes outside of the dynamic range of the link is performed by changing the amplitude of (e.g., attenuating) such signals prior to transmission, and restoring such signals to their original amplitude after transmission. Signal-to-Noise Ratio (e.g., Noise Power Ratio (NPR)) of such digital signals is thereby maintained above a predetermined minimum level. The method and apparatus have advantageous applications in bi-  
10 directional commercial CATV systems.